

What is claimed is:

1. DNA plasmid (ATCC \_\_\_\_\_) designated as BL21/DE3(8,9 PST) containing the neuS gene from *escherichia coli* K92 and encoding  $\alpha$ 2,8/2,9 polysialyltransferase from *escherichia coli* K92.  
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2. A transformed cell having a gene encoding  $\alpha$ 2,8/2,9 polysialyltransferase from *escherichia coli* K92.
- 10 3. A process for obtaining purified  $\alpha$ 2,8/2,9 polysialyltransferase comprising the following steps:  
  
Step A: expressing a gene encoding  $\alpha$ 2,8/2,9 polysialyltransferase within a transformed cell having said gene for producing said  $\alpha$ 2,8/2,9  
15 polysialyltransferase; and then  
  
Step B: isolating the  $\alpha$ 2,8/2,9 polysialyltransferase expressed in said Step A.
- 20 4. A process according to claim 3 wherein the  $\alpha$ 2,8/2,9 polysialyltransferase is from *escherichia coli* K92.
5. Purified recombinant  $\alpha$ 2,8/2,9 polysialyltransferase.
- 25 6. Purified recombinant  $\alpha$ 2,8/2,9 polysialyltransferase according to claim 5 wherein the  $\alpha$ 2,8/2,9 polysialyltransferase is from *escherichia coli* K92.
7. A method for converting a substrate of  $\alpha$ 2,8/2,9 polysialyltransferase into a product, said method comprising the step of contacting the substrate with  $\alpha$ 2,8/2,9 polysialyltransferase under conditions for promoting enzymic catalysis of a conversion

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of the substrate into the product.

8. A method according to claim 7 wherein the α2,8/2,9 polysialyltransferase is from *escherichia coli* K92.

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